

SHARAPOV, M. A., MOGILKO, A. M.

Feed-Water

Use of waste water for feeding boilers. Za ekon. top., No. 2, 1952

Monthly List of Russian Accessions, Library of Congress, March 1952. Unclassified.

MOGILKO, A.D.

Star maps and atlases published in Russia and in the U.S.S.R.  
Ist.-astron.issl. no.7:147-180 '61. (MIRA 14:9)  
(Stars—Atlases)

YAKHNO, G.S.; MOGILKO, A.D. (Moskva)

School telescope-refractor. Fiz.v shkole 20 no.4:108-110 J1-Ag  
'60. (MIRA 13:8)

1. 4-ya srednyayz shkola, g.Arsauas. (for Yakhno). Fiz.v shkole  
20 no.4:108-110 J1-Ag '60. (MIRA 13:8)  
(Telescope)

BASYKIN, V.V.; BRONSHTEIN, V.A.; VORONTSOV-VIEL'YAMINOV, B.A.; DAGAYEV, M.M.;  
DMITRIYEV, L.S.; ISOTOV, A.A.; IULIKOV, K.A.; KUNITSKIY, R.V.;  
MARTINOV, D.Ya.; MINCHENKOV, Ye.Ye.; MOGILKO, A.D.; PIKUL', Yu.G.;  
POPOV, P.I.; REZNIKOV, L.L.; SVETLOV, E.I.; SEMAKIN, L.K.;  
SHISTOVSKIY, K.N.

Mikhail Evgen'evich Nabokov; obituary. Fis. v shkole 20 no.3:110-  
111 My-Je '60. (MIRA 13:11)

(Nabokov, Mikhail Evgen'evich, 1887-1960)

~~MOGILO, A.D. (Moskva)~~

Astrophysical observations during the astronomy course. Fiz. v shkole  
19 no.1:87-92 Ja-P '59. (MIRA 12:3)

1. Gosudarstvennyy pedagogicheskiy institut imeni V.I. Lenina.  
(Astronomy--Observations)

POKROVSKIY, A.A.---(continued) Card 2.

5. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.315 Moskvy (for Zverykin). 6. Srednyaya shkola No.212 Moskvy (for Kamenetskiy). 7. Krasnodarskiy pedinstitut (for Kostin). 8. Srednyaya shkola No.18 g.Suny (for Mirgorodskiy); 9. Ryazanskiy pedinstitut (for Orekhov). 10. Stalingradskiy pedinstitut (for Orlov). 11. Moskovskiy gorodskoy pedinstitut; srednyaya shkola No.443 Moskvy (for Terent'yev). 12. Balashevskiy pedinstitut (for Kholyapin). 13. Institut metodov obucheniya Akademii pedagog.nauk; srednyaya shkola No.215 Moskvy (for Shakhmayev). 14. Moskovskiy pedinstitut im. V.I.Lenina (for Starostin). 15. Pedinstitut im. V.I.Lenina v Moskve (for Mogilko). 16. Zaveduyushchiy narodnoy astronomicheskoy observatoriyey Dvortsa kul'tury Moskovskogo avtozavoda im. Likhacheva (for Semakin).

(Physical instruments)

POKROVSKIY, A.A., kand.pedagog.nauk, starshiy nauchnyy sotrudnik;  
 BUROV, V.A., uchitel'; GLAZYRIN, A.I., starshiy nauchnyy sotrudnik,  
 pensioner; DUBOV, A.G., starshiy nauchnyy sotrudnik; ZVORTKIN, B.S.,  
 nauchnyy sotrudnik; KAMENETSKIY, S.Ye., uchitel'; KOSTIN, G.N., pre-  
 podavatel'; MIRGORODSKIY, B.Yu., uchitel'; OREKHOV, V.P., prepoda-  
 vatel'; ORLOV, P.P., prepodavatel'; RAZUMOVSKIY, V.G., aspirant;  
 RUMYANTSEV, I.M., aspirant; THERENT'YEV, M.M., prepodavatel';  
 KHOLYAPIN, V.G., prepodavatel'; SHAKHMAYEV, N.M., nauchnyy sotrudnik,  
 uchitel'; VOYTENKO, I.A., uchitel' sredney shkoly, pensioner; STA-  
 ROSTIN, I.I., prepodavatel'; MOGILKO, A.D., aspirant; SEMAKIN, N.K.;  
 KOPEKOVA, L.A., red.; LAUT, V.G., tekhn.red.

[New school equipment for use in physics and astronomy] Novye  
 shkol'nye pribory po fizike i astronomii. Pod red. A.A.Pokrovskogo.  
 Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1959. 161 p. (MIRA 12:11)

1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut metodov  
 obucheniya. 2. Laboratoriya metodiki fiziki Instituta metodov obuche-  
 niya Akademii pedagogicheskikh nauk RSFSR (for Pokrovskiy). 3. Sred-  
 nyaya shlesnodorozhnaya shkola st.Kratovo, Moskovskoy oblasti (for  
 Burov). 4. Institut metodov obucheniya Akademii pedagogicheskikh nauk  
 (for Glazyrin, Dubov, Razumovskiy, Rumyantsev).

(Continued on next card)

AUTHOR: Mogilko, A.D., (Moscow) 47-58-2-13/30

TITLE: A Model of the Motion of Earth Satellites (Model' dvizheniya sputnikov zemli)

PERIODICAL: Fizika v Shkole, 1958, Nr 2, p 61 (USSR)

ABSTRACT: A short description of the model is given. It consists of a stand, a globe, a handle and a wire, on which the satellite is fixed. The handle is connected with a transmission gear so that the movement of the satellite is synchronized with the rotation of the globe. There are 2 figures.

AVAILABLE: Library of Congress

Card 1/1 1. Satellites-Motion 2. Satellite models-USSR



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

MOGILKO, A.D.; DAGAYEV, M.M., red.; CHUVALDIN, A.M., red.kart;  
NEMTSSEVICH, Ye.A., kartograf

[School star atlas] Uchebnyi svesdnyi atlas. Uchpedgis.  
1958. 1 v. (MIRA 12:1)  
(Stars--Atlases)

MOGILKO, A.D.

Visual method in teaching astronomy in secondary schools. Uch.  
zap.MGPI 118:98-112 '57. (MIRA 13:5)  
(Astronomy--Study and teaching)

*MOGILKO, A.D.*

**AUTHOR:** Mogilko, A.D. (Moscow) 47-4-7/20

**TITLE:** The Study of the Visible Movements of Heavenly Bodies (Izucheniye vidimyykh dvizheniy svetil)

**PERIODICAL:** Fizika v shkole, 1957, No 4, pp 49-53 (USSR)

**ABSTRACT:** The article contains instruction on how to teach the students an astronomy lesson, about the visible movements of the sun, the moon and the stars, the phases of the moon and how the solar eclipse comes about. As an aid a lantern, 20 - 40 cm long and 3 - 5 cm diameter, (Figure 1) and a map (Figure 2) are used. There are 2 figures.

**ASSOCIATION:** State Pedagogical Institute imeni V.I. Lenin, Moscow (Gosudarstvennyy pedagogicheskiy institut imeni V.I. Lenina, Moskva)

**AVAILABLE:** Library of Congress

Card 1/1

MOGILEV, A.D.

Studying topics of time as observed in classes. M'iz.v shkola 16 no.4:  
59-62 J1-Ag '56. (MLRA 9:9)

1.Moskva, Pedagogicheskiy institut imeni V.I.Lenina.  
(Time measurements--Study and teaching)

**NOGIMED, A.D.**

**Astronomical chart practice. Vis.v shkole 14 no.1:74-77 Ja-F '54.**  
(MIRA 7:1)

1. Zaporozh'ye, 14-ya srednyaya shkola.  
(Astronomy--Charts, diagrams, etc.)

MOGILKO, A.  
MOGILKO, A.

Riddles of an experienced captain. Znan.sila 32 no.9:46 S '57.  
(Day) (Night) (MIRA 10:10)

MOGILKIN, V.

LIDIN, D.; NORMANSKIY, M.; GOLUBEV, B.; SOROKIN, M.; MAKSIMOV, M.; ALEKSANDROV, I.; MOGILKIN, V.; LAKISOV, A.; FIL'CHUK, A.; SAVEL'YEV, V.

Representatives of the people. Mast.ugl. 7 no.4:3-7 Ap '58.  
(Russia--Politics and government--Biographies) (MIRA 11:4)

MOGILINA, N.P.

Changes in kinesthesia in patients suffering from chronic  
alcoholism and their dynamics under the influence of an  
alcoholic load. Probl.sud.psikh. no.12:161-168 '62.

(MUSCULAR SENSE) (ALCOHOLISM) (MIRA 16:4)



MOGILINA, N.P.

Erroneous diagnosis of oligophrenia in a case of schizophrenia  
complicated by reactive stratifications. Prak.sudebnopsikh.  
ekspert. no.5:83-87 '61. (MIRA 16:4)  
(MENTAL DEFICIENCY) (SCHIZOPHRENIA)

MOGILINA, N.I.

Wrong diagnosis of alcoholic paranoia. Prak.sudebnopsikh.ekspert.  
no.4:58-64 '61. (MIRA 16:2)  
(PARANOIA) (FORENSIC PSYCHIATRY) (ALCOHOLISM)

VESELKIN, P.N.; MOGILIN, V.P.

Simultaneous dynamic study and juxtaposition of the data of direct and indirect calorimetry as a method of improving the accuracy of calculations of the overall balance of energy and detecting the qualitative disorders of the overall energy metabolism in pathological states. Nauch. inform. Otd. nauch. med. inform. AMN SSSR no.1:15-16 '61 (MIRA 16:11)

1. Institut eksperimental'noy meditsiny (direktor - chlen korrespondent AMN SSSR D.A.Biryukov) AMN SSSR, Leningrad.

\*

MOGILIN, A.A., inzh.

Technological basis for norms and economy of power resources. Prom.  
energ. 20 no.9:2-5 S '65. (MIRA 18:9)

DERVIZ, G.V.; MOGILEY, I.M.; KIMERAL, R.E.

Double manometric apparatus with magnetic stirrer for the  
analysis of blood gases. Vop.med.khim. 8 no.1:87-92 Ja-F '62.  
(MIRA 15:11)

1. TSentral'nyy institut gematologii i perelivaniya krovi  
Ministerstva zdravookhraneniya SSSR, Moskva.  
(MANOMETER) (BLOOD, GASES IN)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

MOGIL'NITSKIY, N.A., inzh.

Use of 20 kv. power transmission networks in the Latvian S.S.R.  
Energ. stroit. no. 1 23.11. '65

MOGILEVTSOVA, N.A., kand.sel'skokhoz.nauk

Improve the quality of spring wheat in Siberia. Kemledelle 8  
no.11:26-34 N '60. (MIRA 13:10)

1. Sibirskiy nauchno-issledovatel'skiy institut sel'skogo khozyaystva.  
(Siberia--Wheat)

MOGILEVTSOVA, N.A.

MOGILEVTSOVA, N.A., kandidat sel'skokhozyaystvennykh nauk; ZHUKOVA, V.K.,  
kandidat tekhnicheskikh nauk; ALEXEV, R.G.; TUFEROVA, A.I.

Harvesting spring wheat in separate stages. Zemledolie 5 no.8:58-63  
Ag 157. (MLRA 10:9)

(Wheat--Harvesting)



MOGILEVTSEVA, N. A.

"Local Fertilizers and the Grain Crop Yield on the Turf-Podsolic Soil of Omsk Oblast." Cand Agr Sci, Omsk Agricultural Inst imeni S. M. Kirov, Omsk, 1955. (KL, No 9, Feb 55)

SO: Sum. No. 631, 26 Aug 55- Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

39 c. 20 cm. 3.000 eks. 60 k. - (54-58395) p. 633.1.0015(57.14) Kn. 1sd., 1954.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

7. Flax cultivation in Siberia. Kolkh. proizv. 13, No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

VORONOVA, N.A.; MOGILEVTSEV, O.A.

Using cerium for the inoculation of cast iron. Metalloved. 1  
term. obr. met. no.8:38-42 Ag '63. (MIRA 16:10)

1. Dnepropetrovskiy institut chernoy metallurgii.

VORONOVA, N.A.; MOGILEVTSEV, O.A.; GRAYFER, M.Z.

Effect of the material of the crucible (ladle) on the residual content  
of cerium in cast iron being held under a reducing layer. Lit.proizv.  
no.4:21 Ap '63. (MIRA 16:4)

(Cast iron—Metallurgy)

(Crucibles)

VORONOVA, N.A.; KHIL'SHEYN, Ye.N.; MOGILEVTSYEV, O.A.; DANILETS, V.N.

Use of natural gas in large cupola furnaces. Lit.proizv. no.11:1-2  
N '62. (MIRA 15:12)  
(Cupola furnaces)

VASIN, A.V.; KOCHETOVSKIY, B.A.; PARAKIN, V.K.; STANKUNOVICHUS, A.;  
MOGILEVTSEY, A.I.; KADENATSIY, A.N.

Through the Soviet Union. Veterinariia 35 no.9:92-95 S '58.  
(Veterinary medicine) (MIRA 11:9)

1990



34, 35, 3165, 67

*Microbiology*, *Immunology*, *Bacteriology*, *Virology*

The above conditions provide a means for obtaining streptococci from the feces of patients with streptococcal infections; the microbes are isolated, and purified by the procedures. To improve the efficiency of the procedure, the serial "inocula" is cultured in the medium of J. H. H. and the filtrate is purified with cholesterol.

**SECRET**

NO: 415.14-015.172.14-577.153.345



SOV/122-59-6-1/27  
Investigation of the Operation of a Two-stroke Engine with Disc-type  
Valve Gear

disc and cover. Apart from reduced cylinder length, the basic advantages are: the elimination of reciprocating distribution gear and the removal of the piston from the exhaust gas zone. The mechanism can be used in a two-stroke Diesel engine. There are 5 figures.

Card 4/4

SOV/122-59-6-1/27

Investigation of the Operation of a Two-stroke Engine with Disc-type Valve Gear

the excess air coefficient at different scavenge pressures, showing a large increase of power with scavenge pressure, accompanied by increased specific fuel consumption. Increasing the speed from 1 600 to 2 000 r.p.m. reduces the indicated pressure by reducing the weight of the cylinder charge. The specific fuel consumption, the utilisation of the scavenge air, the scavenge air coefficient, the excess air coefficient, the indicated pressure and the power have been plotted against the scavenge air pressure (Figure 4). It is concluded that the gas-exchange process has not been fully effective. Increasing the size of the inlet and outlet ports would be necessary. The indicator diagram (Figure 5b) shows an adequate fullness in the idle stroke region and a relatively low value of the maximum pressure. The superiority of the tested engine compared with the Ricardo engine operating under similar conditions (e.g. "Aircraft Engineering", 1950) is claimed. The engine components have worked satisfactorily except for some seizures between the inlet

Card3/4

SOV/122-59-6-1/27  
Investigation of the Operation of a Two-stroke Engine with Disc-  
type Valve Gear

against sealing rings which, in turn, are sealed by piston-ring type seals against the cylindrical recess in which they are housed. The absence of scavenge ports reduces the overall length of the cylinder. The optimum fuel injection and ignition crank angles were found by test, at 1 600 r.p.m. and 980 mm mercury column scavenging pressure, to be  $160^{\circ}$  ahead of the t.d.c. and  $35^{\circ}$  ahead of the t.d.c., respectively. 12 variants for locating the injection nozzle and sparking plug in the combustion chamber were tested, all yielding satisfactory operation without decisive advantage over one another. Tests with different gas distribution phasing showed the best angle for exhaust opening to be  $95^{\circ}$  after the t.d.c. and closing  $239^{\circ}$  after the t.d.c. The inlet opening at  $121^{\circ}$  after the t.d.c. and closing up at  $265^{\circ}$  after the t.d.c. were found best. Varying the phasing produces output power differences of up to 15%. Power and fuel consumption curves were plotted against

Card2/4

SOV/122-59-6-1/27

**AUTHORS:** Khaylov, M.A., Doctor of Technical Sciences, Professor,  
Shal'nev, V.I. and Mogilevskiy, Ye.Z., Engineers

**TITLE:** Investigation of the Operation of a Two-stroke Engine  
with Disc-type Valve Gear

**PERIODICAL:** Vestnik mashinostroyeniya, 1959, Nr 6, pp 3 - 8 (USSR)

**ABSTRACT:** A two-stroke engine with gas-distribution control by one inlet and one exhaust disc based on a patent due to V.I. Shal'nev (Author's Certificate Nr 8243) is stated to yield a relatively large power output per unit of swept volume. A single cylinder test engine with a bore of 148 mm, a stroke of 144 mm (2.48 litres) and a nominal compression ratio of 5.56 illustrated in cross-section (Figure 1) and described was built and tested. The distributor discs are placed in the cylinder head horizontally (inlet) and alongside the cylinder (exhaust) at a small angle to the vertical so that the inlet is vertical against the piston face and the exhaust nearly horizontal, at a small angle to the piston face. Both discs have similar profiled openings and are rotated by pinions engaging with their toothed rims. The discs are sealed by face seals on the side facing the cylinder

Card 1/4

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6  
Influence of the content of ... S/129/627000/005/005/011  
E073/E535

applying a vacuum, produces a more intensive saturation and a deeper layer than chromating with a powder mixture only in the case of steels with carbon contents not exceeding 0.2%. For 0.2% C steel, the high rate of saturation is only achieved in the case of heating to 1100°C and above. The carbide phase contained the carbides  $M_{23}C_6$  and  $M_{27}C_3$ . The hardness of the chromated layer reached 1670 kg/mm<sup>2</sup>. There is 1 table.

ASSOCIATION: TsNIITMASH

Card 2/2

1.1800  
AUTHOR: Mogilevskiy, Ye.P., Candidate of Technical Sciences  
TITLE: Influence of the content of carbon in steel on the  
rate of chromium diffusion  
PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,  
no.5, 1962, 35-36  
TEXT: Experimental data are given on thermo-diffusion  
chromating of Armco iron and of the steels 20, 30, 40 and Y7 (U7)  
with the following carbon contents: 0.03, 0.17, 0.28, 0.41 and  
0.73%, respectively. The specimens were placed into a container  
together with metallic chromium (fraction 0.5 to 2 mm), covered  
by a lid and placed into a vacuum furnace ( $1 \cdot 10^{-2}$  mm Hg). Then  
they were cooled in vacuum, together with the furnace, to  
150-100°C and then in air; chromating was carried out at 1000,  
1050, 1100, 1150 and 1200°C with holding times of 4, 8 and 12  
hours. For comparison, chromating was also performed in a  
mixture of the following composition: 60% metallic chromium,  
39% aluminium oxide, 1% aluminium chloride (1000, 1100 and 1200°C,  
8 hours). Thermo-diffusion chromating with metallic chromium,  
Card 1/2

**Embrittlement of Steel During Nitriding**

subsequent tempering, including high temperature tempering in high vacuum. It was found that the hydrogen content does not increase in the metal as a result of nitriding. If the metal has a finely dispersed (sorbite) structure and the nitriding process does not take too long, the high impact strength will be conserved. It is advisable to heat treat the metal prior to nitriding for the purpose of obtaining a finely dispersed structure irrespective of the strength properties required.

There are 1 table and 3 references, 2 of which are Soviet and 1 German. ✓

**ASSOCIATION: TsNIITMASH**

Card 2/2

AUTHOR: Mogilevskiy, Ye. P., Candidate of Technical Sciences  
TITLE: Embrittlement of Steel During Nitriding  
PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,  
1960, Nr 6, pp 50-52 (USSR)

ABSTRACT: Data are given which were obtained in investigating the embrittlement of metal of spindles of steam locks of diameters up to 25 mm. The experiments have shown that embrittlement of carbon steel during the process of nitriding will occur if the metal has a coarse-disperse structure with developed intercrystallite boundaries. The embrittlement is connected with an increase of the nitrogen content in the internal films of the metal resulting from higher diffusion speeds along the grain boundaries and phase embrittlement. Embrittlement of such a steel was observed for all conditions of nitriding; use of hydrogen absorbing additives does not protect steel from embrittlement and does not reduce the degree of embrittlement. The embrittlement gained during the process of nitriding cannot be eliminated by

Card 1/2

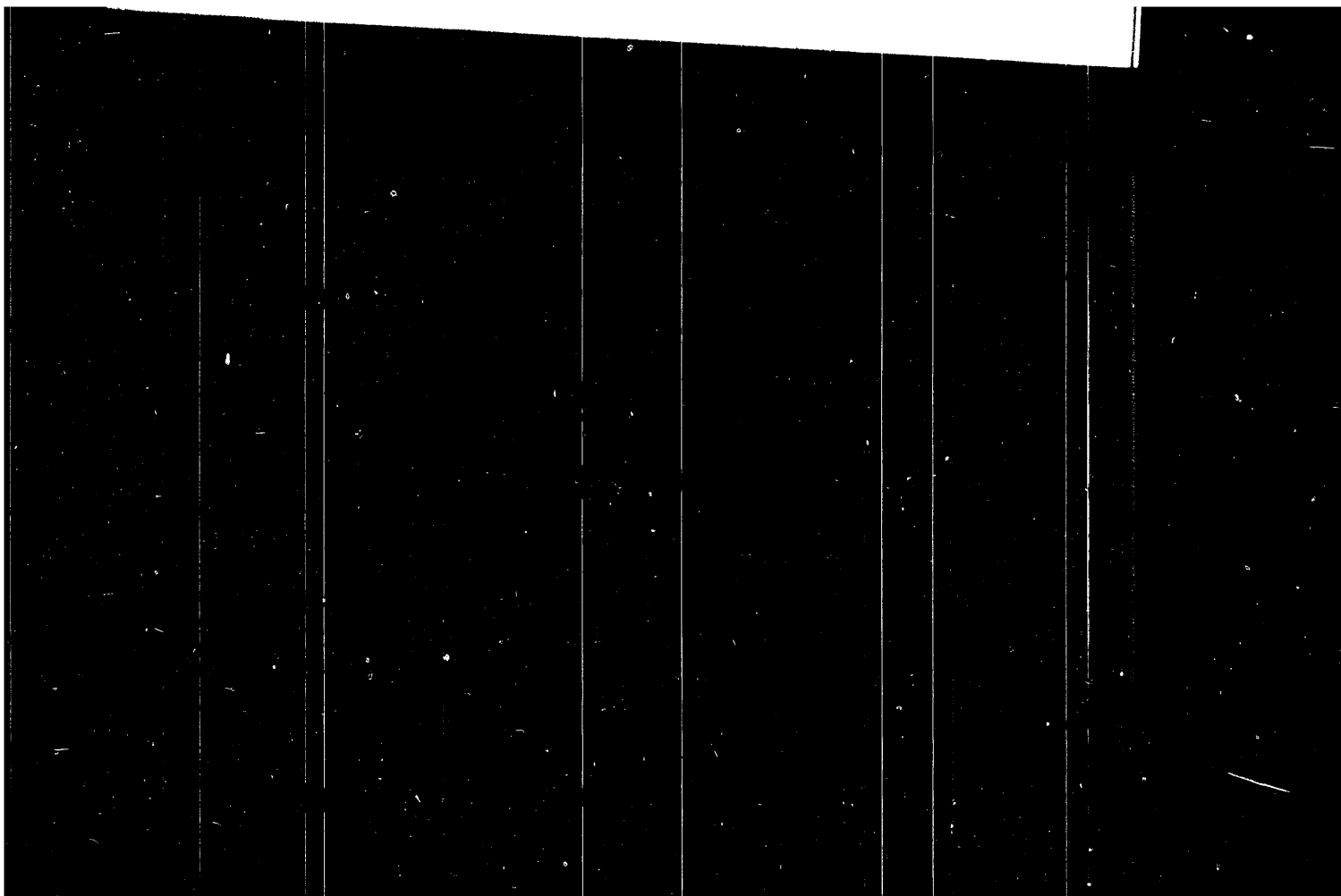


APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

Using induction heating in hardening a 100% steel  
[Ind.] LONITOMASH no.33:154-172 '54.  
(Induction heating)

(MIRA 8:2)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

MOGILEVSKIY, Ye. P.

Dissertation: "Determination of the conditions for dissolution of carbides in steel of the Carbide type upon induction heating." Cand Tech Sci, Leningrad Polytechnic Institute, Leningrad, 1953. (Referativnyy Zhurnal-Khimiya, No 11, Moscow, Jan 54)

CO: SOA 318, 23 Dec 1954

L 45460-66

ACC NR: AP6022725

fiber was placed in a second bath (20°C) containing  $\text{CuSO}_4$ . The fiber then formed was

Physical and Mechanical Properties of Viscose and Copper Xanthate Fiber  
/esterification of copper xanthate fiber, gamma = 30 to 35/

| Staple fiber                                  | Number | Breaking length,<br>km | Elongation,<br>% | Number of double<br>bends |
|-----------------------------------------------|--------|------------------------|------------------|---------------------------|
| Viscose (two-bath alkaline<br>forming method) | 1859   | 19.5                   | 11.4             | 1988                      |
| "                                             | 6760   | 18.9                   | 9.0              | 1240                      |
| Copper xanthate                               | 1130   | 11.5                   | 20.8             | 2674                      |
| "                                             | 4400   | 9.2                    | 14.2             | 1962                      |

put through acid, washed and dried. This method was used in all subsequent fiber preparations. The chemical processes and the basic reactions occurring in the fiber formation are quite complex and are not yet fully understood. The results obtained by the authors led them to the assumption that the fiber formed in the two-bath method is primarily a mixture of cuprous salt of cellulose xanthic acid and cellulose dioxanthogenide. The fiber is insoluble in a copper ammonia solution as well as in an 8% NaOH solution. Comparative data for this fiber and for viscose fiber are shown in the above table. The fiber is bacteriostatic and is a bactericide as well. Production tests are in process to determine the possibilities of using this fiber in certain branches of industry, the antibiotics industry in particular. The authors express their thanks to Ye. S. Bylinkina and G. D. Pestereva (Institute of Antibiotics) for determining the bactericidal properties of copper xanthate fiber. Orig. art. has: 2 formulas.

Card 2/2 SUB CODE: 11, 07, 06 / SUBM DATE: 25 Apr 65/ ORIG REF: 005 / OTH REF: 003  
fy

L 45460-66 EWT(m)/EWP(1)/T RM

ACC NR: AP6022725

(A)

SOURCE CODE: UR/0183/66/000/002/0049/0051

AUTHOR: Nepochatykh, V. I.; Rogovin, Z. A.; Finger, G. G.; Mogilevskiy, Ye. M. 48ORG: [Nepochatykh, Rogovin] MTI; [Finger, Mogilevskiy] VNIIV 44TITLE: Production of copper xanthate fiber

SOURCE: Khimicheskiye volokna, no. 2, 1966, 49-51

TOPIC TAGS: synthetic fiber, xanthic acid, bactericide, wood chemical product, copper compound, organic sulfur compound, *cellulose plastic, synthetic fiber, copper compound.*

ABSTRACT: The authors used available data on the change occurring in the stability of cellulose xanthate in accordance with the nature of the cations contained in the salts to investigate the possibilities of manufacturing a fiber made of cellulose copper xanthate in order to study the basic properties of this fiber and to determine the fields in which practical use could be made of it. While production of the fiber is possible using a single bath, the use of the process proved to be undesirable because the copper sulfate in the precipitating bath entered an exchange reaction not only with the sodium xanthate, but with the sulfur compounds in the viscose as well. Copper consumption was increased and the fiber obtained was dirty. Use of two baths was resorted to and was found to be quite simple and caused no complications in the technological process. The first bath contained sodium sulfate and sodium bicarbonate or sulfate of ammonia, and was used to coagulate the viscose. After washing in a  $\text{Na}_2\text{SO}_4$  solution the

Card 1/2

UDC: 677.467

L 38119-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6012414

(A)

SOURCE CODE: UR/0183/65/000/006/0003/0009

AUTHOR: Mikhaylov, N. V.; Mogilevskiy, Ye. M.; Nikolayeva, N. S.; Surov, N. A.; Mayboroda, V. I.; Lin'kova, Z. K.; Bochkina, V. S.

ORG: VNIIV

TITLE: Properties and methods of making rayon filaments

SOURCE: Khimicheskiye volokna, no. 6, 1965, 3-9

TOPIC TAGS: synthetic fiber, organic synthetic process, textile, textile engineering, textile industry machinery

ABSTRACT: Various patented processes for obtaining viscose fibers similar to cotton were evaluated. Basic technological parameters were worked out for a 1-bath and 2-bath method of forming and drawing xanthogenate filaments. Requirements for construction of spinning equipment were determined. Viscose filaments whose physical-mechanical properties compared to those of foreign rayon filaments of average strength were obtained on pilot equipment. Orig. art. has: 5 tables.

SUB CODE: 11, 13/ SUBM DATE: 02Mar65/ ORIG REF: 003/ OTH REF: 022

Card 1/1

UDC: 677.463

MOGILEVSKIY, Ye.M.; GINZBERG, M.A.; KHURGINA, R.A.

Degradation of alkali cellulose by means of oxidizers and catalysts.  
Khim. volok. no.1:54-57 '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

KHARUZIN, N.A.; KONKOV, A.I.; MOGILEVSKIY, Ye.M.

Advanced work practices of the collectives of synthetic fiber  
factories. Khim volok. no.1:1-26 '65. (MIRA 18:2)

1. Direktor Kiyevskogo kombinata iskusstvennogo volokna (for  
Khrusin). 2. Direktor Kalininskogo kombinata iskusstvennogo  
volokna (for Konkov). 3. Nachal'nik otdela gidrattsellyuloznykh  
volokon Vsesoyuznogo nauchno-issledovatel'skogo instituta  
iskusstvennogo volokna (for Mogilevskiy).



FINGER, G.G.; MOGILEVSKIY, Ye.M.; BAKSHEYEV, I.P.

Study of the formation process of viscose rayon. Khim. volokn. no 4:  
44-46 '64. (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

FINGER, G.G.; MOGILEVSKIY, Ye.P.; BAKSHEYEV, I.P.; FINKEL'SHTAYN, L.B.

Determining zinc xanthates in freshly formed viscose fibers.

Khim.volok.no.5:48-49 '64.

(CHINA 47:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.

MOGILEVSKIY, I.S.; KHORIKOVA, G.I.; MINOVA, I.D.; SPILINA, A.V.

Effect of the spinability and filament properties of  
viscose silk produced from the silkworms. *Izv. Vsesoyuzn. nauchn. issled. inst. khim. volokna*,  
no. 453-44, 1964.

1. Vsesoyuznyy nauchnoissledovatel'skiy tsentr khim. volokna.

RYAUZOV, Aleksandr Nikolayevich; SADE, L.S., red.; MOGILEVSKIY, Ye.M.,  
nauchn. red.

[Technology of synthetic fibers; production of viscose  
fibers] Tekhnologiya khimicheskikh volokon; proizvodstvo  
viskoznogo volokna. Moskva, Vysshaia shkola, 1964. 114 p.  
(MIRA 18:3)

MOGILEVSKIY, Ye.M.; NIKOLAYEVA, N.S.; AFONINA, T.M.; DEMINA, N.V.; LIN'KOVA, Z.K.

Modification of the properties of viscose fibers by means of partial  
acetylation. Khim.volok. no.2:30-32 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

(Rayon) (Acetylation)

AFONINA, T.M.; NIKOLAYEVA, N.S.; MOGILEVSKIY, Ye.M.; LIN'KOVA, Z.K.

Effect of the structure of viscose fibers on the degree of their  
acetylation. Khim.volek. no.2:30-33 '62. (MIRA 15:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

(Viscose)

(Acetylation)

MOGILEVSKIY, Ye.M.; KHAZANOVA, A.S.; FINGER, G.G.

Formation of viscose silk by a continuous process at high speed.  
Khim.volok. no.5:43-46 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

(Rayon)

Improvement of the ...

S/183/61/000/001/006/006  
B101/B205

Table 4

| 1 Препарат                                                            | 2                      |                | 3                       |                | 6                                                                     |
|-----------------------------------------------------------------------|------------------------|----------------|-------------------------|----------------|-----------------------------------------------------------------------|
|                                                                       | Прочность<br>в %       | Удлинение<br>% | Прочность<br>в %        | Удлинение<br>% |                                                                       |
|                                                                       | 4 в сухом<br>состоянии |                | 5 в мокром<br>состоянии |                | Устойчивость<br>к истиранию<br>при нагрузке<br>30 г (число<br>циклов) |
| 7 Шелк без обработки                                                  | 16,7                   | 20,7           | 9,0                     | 29,4           | 180                                                                   |
| 8 Обработан раствором<br>сополимера 0,5%-ной<br>концентрации          | 16,9                   | 20,4           | 8,8                     | 27,4           | 188                                                                   |
| 9 То же, 1%-ной кон-<br>центрации                                     | 17,3                   | 21,0           | 8,9                     | 29,3           | 260                                                                   |
| 10 То же, 2%-ной кон-<br>центрации                                    | 17,5                   | 21,8           | 8,6                     | 29,0           | 320                                                                   |
| 11 То же, 3%-ной кон-<br>центрации                                    | 15,9                   | 21,2           | 7,5                     | 27,1           | 224                                                                   |
| 12 Обработан раствором<br>поливинилцетата<br>1%-ной концентра-<br>ции | 17,5                   | 20,0           | 9,8                     | 30,0           | 344                                                                   |
| 13 То же, 2%-ной кон-<br>центрации                                    | 17,3                   | 20,4           | 9,3                     | 29,0           | 168                                                                   |

Card 4/4



Improvement of the ...

8/183/61/000/001/006/006  
B101/B205

Table 1

Card 3/4

| Table 1<br>4 Препарат        | Прочность, рсн       |                                 | Удлинение, %              |                                 | Устойчивость<br>к истиранию<br>(число циклов) |
|------------------------------|----------------------|---------------------------------|---------------------------|---------------------------------|-----------------------------------------------|
|                              | в сухом<br>состоянии | в мок-<br>ром<br>состоя-<br>нии | в сухом<br>состоя-<br>нии | в мок-<br>ром<br>состоя-<br>нии |                                               |
| Шелк без обработ-<br>ки      | 15,4                 | 7,7                             | 19,7                      | 33,4                            | 124 } нагрузка<br>30 г                        |
| Обработан моно-<br>этиленом  | 13,5                 | 6,1                             | 26,3                      | 36,8                            | 432 }                                         |
| То же                        | 13,2                 | 6,6                             | 31,8                      | 39,5                            | — }                                           |
| То же                        | 12,6                 | 6,6                             | 33,0                      | 41,8                            | 954 } нагрузка<br>15 г                        |
| Шелк без обработ-<br>ки      | 16,7                 | 9,2                             | 20,3                      | 28,6                            | 320 } нагрузка<br>30 г                        |
| Обработан диэтил-<br>амином  | 16,3                 | 9,1                             | 20,5                      | 29,5                            | 652 }                                         |
| Шелк без обработ-<br>ки      | 14,0                 | 6,8                             | 24,5                      | 36,2                            | — }                                           |
| Обработан диэтил-<br>амином  | 13,6                 | 6,7                             | 24,7                      | 35,8                            | — }                                           |
| То же                        | 13,2                 | 6,6                             | 24,8                      | 36,9                            | — }                                           |
| Шелк без обработ-<br>ки      | 13,4                 | 5,8                             | 21,3                      | 31,1                            | 732 } нагрузка<br>15 г                        |
| Обработан триэтил-<br>амином | 12,1                 | 5,3                             | 19,1                      | 25,9                            | 1280 }                                        |
| То же                        | 12,7                 | 5,8                             | 23,4                      | 31,9                            | — }                                           |

Improvement of the ...

S/183/61/000/001/006/006  
B101/B205

tained 3-3.5% copolymer, while in the latter case, it contained 5.5-6% polyvinyl acetate. The physicomachanical properties of the fibers (metric count: 75) are collected in Table 4. There are 4 tables and 19 references: 3 Soviet-bloc and 15 non-Soviet-bloc. 1

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Legend to Table 1: 1: preparation; 2: breaking length, km; 3: elongation; 4: dry; 5: wet; 6: resistance to abrasion (number of cycles); 7: unfinished rayon; 8: rayon treated with monoethyl amine; 9: dto.; 10: treated with diethyl amine; 11: treated with triethyl amine; 12: load, g;

Legend to Table 4: 1: preparation; 2: breaking length, km; 3: elongation; 4: dry; 5: wet; 6: resistance to abrasion under a load of 30 g (number of cycles); 7: unfinished rayon; 8: rayon treated with 0.5% copolymer solution; 9: dto. with 1% solution; 10: dto. with 2% solution; 11: dto. with 3% solution; 12: treated with 1% solution of polyvinyl acetate; 13: dto. with 2% solution.

Card 2/4

S/183/61/000/001/006/006  
B101/B205

AUTHORS: Mogilevskiy, Ye. M., Nikolayeva, N. S., Afonina, T. M.,  
Lin'kova, Z. K.

TITLE: Improvement of the properties of viscose fiber

PERIODICAL: Khimicheskiye volokna, no. 1, 1961, 37-40

TEXT: An attempt has been made to improve the elastic properties of viscose fiber by treatment with organic amines and by covering the fiber with polymer films. 1) Viscose rayon (metric count: 60) was treated with monoethyl or diethyl amine at 40°C for 4 hr, or with triethyl amine at 20°C for 1 hr. After the treatment it was carefully washed at 0°C. Results are summarized in Table 1. Fiber treated with monoethyl amine showed increased adsorption of iodine and decreased hydrolyzability. 2) Viscose rayon was treated with a 1-2% alcoholic solution of the copolymer of caprolactam and "AP" ("AG") salts (hexamethylene amine adipate) (60:40), or with a 1-2% solution of polyvinyl acetate in 65% ethanol at 40°C. After the treatment it was washed with hot water (80°C). In the former case, the fiber con-

Card 1/4

MOGILEVSKIY, Ya.M.; KHOR'KOVA, O.G.; FINGER, G.G.; PREDVODITELEVA,  
A.D.; KUZ'MINA, G.P.; MIKHAYLENKO, P.P.; TUMAYAN, S.A.

Continuous process for producing viscose rayon and for its  
finishing. Khim. volok. no. 6:25-27 '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna (for Mogilevskiy, Khor'kova, Finger). 2. Vsesoyuznyy  
nauchno-issledovatel'skiy institut trikotazhnoy promyshlennosti  
(for Predvoditeleva, Kus'mina). 3. Tsentral'nyy nauchno-issledo-  
vatel'skiy institut shelka (for Mikhaylenko, Tumayan).  
(Rayon)

NIKOLAYEVA, N.S.; MOGILEVSKIY, Ye.M.; LINKOVA, Z.K.

Study of the properties of cellulose solutions in complex iron -  
tartaric acid - sodium hydroxide. Khim.volok. no.4:20-22 '60.  
(MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

(Cellulose)

The values of the fiber obtained by the centrifuging method are different within the cake, and lower than in the fiber produced in a continuous process. Furthermore, the reversible and irreversible deformation were determined in the case of elongation. Elongation up to 40% of the breaking elongation is fully reversible. With stronger elongation, the irreversible deformation increases linearly. Here, the fiber produced in a continuous process showed lower values of irreversible deformation. There are 5 figures, 2 tables, and 6 Soviet references.

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Card 3/3

| Layers of the cake |         | Yarn number | breaking length, km |      | elongation, % |      | Number of double bendings |
|--------------------|---------|-------------|---------------------|------|---------------|------|---------------------------|
| after shrinkage    |         |             | dry                 | wet  | dry           | wet  |                           |
|                    | outside | 7.15        | 24.0                | 12.3 | 13.1          | 13.9 | 1192                      |
|                    | center  | 7.05        | 24.3                | 12.0 | 13.7          | 14.7 | 1028                      |
|                    | inside  | 7.15        | 21.8                | 11.2 | 14.2          | 15.6 | 1784                      |

Table 2. Physicomechanical characteristic values of the fiber produced in continuous processes

| Fiber            | Yarn number | breaking length, km |      | elongation, % |      | Number of double bendings | Type of drying rollers |
|------------------|-------------|---------------------|------|---------------|------|---------------------------|------------------------|
|                  |             | dry                 | wet  | dry           | wet  |                           |                        |
| before shrinkage | 7.41        | 26.6                | 13.4 | 8.7           | 14.6 | 1258                      | Two cylinders          |
|                  | 7.24        | 26.6                | 12.9 | 9.7           | 15.2 | 1615                      | Cone and cylinder      |
|                  | 7.34        | 27.4                | 13.2 | 10.2          | 15.3 | 1693                      | Two cones              |
| after shrinkage  | 7.03        | 24.8                | 12.2 | 13.6          | 15.2 | 1466                      | Two cylinders          |

Card 2/3

AUTHORS: Mogilevskiy, Ye. M., Finger, G. G., and Khor'kova, O. J.

TITLE: Distribution of Elongation Deformations in Viscose Fibers

PERIODICAL: Khimicheskiye volokna, 1960, No. 3, pp. 41-43

TEXT: The authors attempted to find out whether the viscose fibers produced by discontinuous centrifuging in the form of cakes differ from the viscose fibers produced in a continuous process. The experimental data concerning breaking length, elongation, and bending test are given in Tables 1, 2: Table 1. Physicomechanical characteristic values of rayon in the layers of the cake

| Layers of the cake |         | Yarn number | breaking length, km |      | elongation, % |      | Number of double bendings |
|--------------------|---------|-------------|---------------------|------|---------------|------|---------------------------|
|                    |         |             | dry                 | wet  | dry           | wet  |                           |
| before shrinkage   | outside | 7.20        | 26.7                | 14.2 | 12.8          | 13.6 | 1059                      |
|                    | center  | 7.18        | 25.6                | 14.0 | 13.1          | 14.6 | 1087                      |
|                    | inside  | 7.18        | 24.9                | 13.1 | 13.7          | 15.2 | 1213                      |

Card 1/3



B004/B005

cellulose and the decomposition of the xanthogenate. An increase in temperature accelerates both the formation of xanthogenate and that of secondary products. The temperature factor of cellulose xanthogenisation is about 2. Between 20 and 30°, there is no strict dependence between gamma number and temperature in spite of accelerated xanthogenisation. It is only observed that gamma falls from 55 (at 20°) to 50 (at 30°). In this temperature range, no differences in the distribution of CS<sub>2</sub> were observed. In the wide range between 0 and 40°, the dependence of gamma on temperature is more distinct (70 at 10°, 48 at 40°). Accordingly, the CS<sub>2</sub> distribution also changes. If the xanthogenisation in the VA apparatus is carried out in such a way that at the beginning of reaction a high temperature prevails which decreases during the reaction, the duration of viscose production can be considerably reduced. There are 2 figures, 3 tables, and 13 references, 8 of which are Soviet.

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

Card 2/2

**AUTHORS:** Mogilevskiy, Ye. M., Ginzberg, M. A., Khurgina, R. A.  
**TITLE:** Temperature Conditions for the Xanthogenisation of Alkali Cellulose  
**PERIODICAL:** Khimicheskiye volokna, 1960, No. 2, pp. 60 - 63

**TEXT:** The authors report on the determination of the esterification degree of cellulose xanthogenate in dependence on the duration of xanthogenisation and on temperature (0-40°). The experiments were carried out in a VA apparatus on refined sulfite cellulose (containing 91.6% of  $\alpha$ -cellulose). The soda lye concentration was 200 g/l. Carbon disulfide was added at a rate of 40% of the  $\alpha$ -cellulose content. The experimental data are presented as follows: Fig. 1, dependence of  $\gamma$  on the duration of xanthogenisation (10 min to 10 h) at 20, 25, and 30°; Table 1, content of bound CS<sub>2</sub> in the xanthogenate in dependence on temperature and duration of the process; Fig. 2, dependence of  $\gamma$  on the duration of xanthogenization at temperatures between 0 and 40°; Table 2, amount of CS<sub>2</sub> used for the formation of secondary products; Table 3, data of the fibers produced. The authors arrived at the following results: During the process of xanthogenisation, the curves for  $\gamma$  pass a maximum which is explained by the simultaneous esterification of alkali

Card 1/2

that Aviol diffuses through the impregnating film (latex albumin or latex resorcinol formaldehyde). There are 1 figure, 1 table, and 5 references, 3 of which are Soviet.

ASSOCIATION: VNIIV (Vsesoyuznyy nauchno-issledovatel'skiy institut  
iskusstvennogo volokna - All-Union Scientific Research Institute  
for Synthetic Fibers) NIISHP (Nauchno-issledovatel'skiy institut  
shinnoy promyshlennosti - Scientific Research Institute of the  
Tire Industry)

**AUTHORS:**

Ionova, T. V., Usina, R. V.,  
Mozilevskiy, Ye. M., Rogovin, Z. A.,  
Segalevich, N. A.

S/183/60/000/01/010/031  
 B004/B014

**TITLE:**

The Effect of the Composition of the Avivage on the Strength of  
 the Linkage Between Tire Cord and Rubber

**PERIODICAL:**

Khimicheskiye volokna, 1960, Nr 1, pp 30-31 (USSR)

**TEXT:** This paper is intended to explain the problem as to whether the appli-  
 cation of the avivage to tire cord strengthens the adhesion between the latter  
 and the rubber impregnation, or whether the avivage applied to the cord diffuses  
 through the impregnating film and changes the contact between the latter and the  
 rubber. The experiments were performed with a special viscose monofilament and  
 14V viscose cord. The fibers were treated with the avivages Nevvol and Avirol,  
 and a simultaneous experiment was conducted without an avivage. The specimens  
 were impregnated with latex albumin, and the strength of linkage of the  
 specimens with SKB rubber was determined from the loosening of fibers under  
 static and repeated compression. Table 1 shows that in the case of both  
 specimens (monofilament and cord) the linkage with the rubber is loosened by  
 avivage, especially in the case of Avirol. Next, the authors studied the  
 diffusion of Avirol prepared by sulfonation of butyl oleate with radioactive

Some Problems Concerning the New Technique and  
Technology in the Field of the Production of Viscose  
Fibers

S/183/60/000/01/002/031  
B004/B014

Regeneration of carbon disulfide has also been improved. It was possible to  
reduce the cost of wages and salaries by 50 per cent on an average. There are  
79 references, 51 of which are Soviet.

ASSOCIATION: VNIIV (Vsesoyuznyy nauchno-issledovatel'skiy institut iskusst-  
vennogo volokna - All-Union Scientific Research Institute for  
Synthetic Fibers)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6  
Some 2500 km are obtained by cross-linking cellulose by means of intermolecular  
Technology in the Field of the Production of Viscose B004/B014  
Fibers

than 50 km are obtained by cross-linking cellulose by means of intermolecular chemical bonds (Ref 42). Besides continuous spinning machines with vertical thread motion, machines with horizontal thread motion have found wide application, in which additional fixation in hot solutions after the drawing process is carried out. A frame designed for the continuous spinning of cord fibers was developed by the saved imeni Karla Marksa (Works imeni Karl Marx) by order of the VNIIV. At present, it is being tested by the Kalinin Kombinat. The daily output of the spinning machines for staple fibers was increased to 30 metric tons by an increase in the number of openings in the spinnerets from 12000 to 20000. Experiments are being made for the purpose of manufacturing spinnerets with 40-50000 openings. Experiments intended to develop a better method for the treatment of staple fibers in rayon tows will be completed before long. A factory manufactures staple rayon tows with periodic tapering (Ref 46). Attempts made to improve the quality of viscose staple fibers by adding other polymers were successful (Ref 56). The coefficient of friction between the fibers is regulated by a special avivage (Ref 57). A new process is being developed by the VNIIV for the production of viscose in the alkaline bath. The spinning rate was increased for viscose silk to 130-140 m/min.

Card 3/4

**Technology in the Field of the Production of Viscose Fibers**

specially pointed out. A technique was developed for continuous mercerization and ripening of alkali cellulose (Refs 12, 13). Various difficulties are still to be overcome in the production of alkali cellulose with a constant composition. The ripening process is accelerated by heating it to a temperature of 50-60°. In spite of the development of continuous processes for the production of viscose, the old VA preparations have not yet lost their great importance. Xanthogenation in the VA apparatus was improved by the Kalinin and Kamenka Kombinats. Besides, this new process permits a reduction in the consumption of carbon disulfide. The new apparatus are made of stainless steel (Ref 22). The cellulose is decarated in thin layers in high-vacuum (Ref 25). A unit of this type which was built by the VNIIV has already been put into operation in a Soviet factory (Ref 72). The improvement of filtration has not yet been completed. The transparency of cellulose is increased by adding surface-active substances. An appropriate industrial method for determining polydispersity has not yet been devised. The quality of fibers is improved by reducing the content of  $H_2SO_4$ , increasing that of  $ZnSO_4$ , adding modifiers to the precipitating bath, as well as by increased drawing. Fibers with a breaking length of more

**TITLE:** Some Problems Concerning the New Technique and Technology in the Field of the Production of Viscose Fibers

**PERIODICAL:** Khimicheskiye volokna, 1960, Nr 1, pp 3-9 (USSR)

**TEXT:** The author believes that the predominating part played by the cellulose fiber in world production is not to be ascribed to the present economic situation, but is based on its usefulness and the considerable improvements to be expected in this branch of industry. The greatest breaking length was obtained for the fiber Fortisan which is produced from regenerated hydrate (80-85 km). The low elongation of this fiber (5-6%) could be improved by treating it with amines (Ref 3). The author supposes that hydrate cellulose can attain a breaking length of 180 km. A comparison between viscose fiber and cord fiber shows that the former is cheaper by 30-50%. Viscose cord fiber will keep its leading position if its breaking length can be extended to 50 km (Ref 6). Next, the author gives a survey of the improvements achieved in the individual production processes. Wood cellulose can be produced with a content of  $\alpha$ -cellulose of 97-98%. Its ripening process is accelerated by catalysts (Co or Mn salts). The great importance of cotton for the production of high-quality cellulose is

Card 1/4



Machinery for the Continuous Process  
of Viscose Rayon Production

77279  
SOV/63-4-6-13/37

are described. Schematic drawings and descriptions of the following machines are given: "Nelson," "Maurer," "Textima" (designed and produced in East Germany), and others. There are 22 references, 2 U.S., 3 U.K., 3 German, 14 Soviet. The U.S. and U.K. references are: S. W. Barkor, R. Albeston, J. Text. Inst., 39, Nr 1, 3 (1948); ibid., 39, Nr 1, 4 (1948); British Patent 16495, 1907; Olive, Chem. Metall. Eng., 45, 168 (1938); Ray. Synthetic Text., Nr 6, 39 (1950).

Card 2/2

5.1400

77279  
SOV/63-4-6-13/37

**AUTHORS:** Mogilevskiy, Ye. M. (Candidate of Technical Sciences),  
Kupinskiy, R. V., Khor'kova, O. G.

**TITLE:** Machinery for the Continuous Process of Viscose Rayon  
Production

**PERIODICAL:** Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 6,  
pp 770-776 (USSR)

**ABSTRACT:** This is a review of literature and industrial data con-  
cerning the construction and use of machinery for con-  
tinuous process of viscose rayon production. The authors  
stated that in the USSR viscose cord is produced only by  
the continuous process on machines designed at the All-  
Union Scientific Research Institute of Synthetic Fibers  
and produced by the Machine Works imeni Karl Marx  
(S. A. Tairov, A. B. Chichkhiani, Equipment of the  
Synthetic Fibres Factories, Gizlegprom, 1955, p 349).  
The factory equipment of German companies "Bemberg" and  
"I. G. Farbenindustrie" and U.S. "Industrial Ray. Corp."

Card 1/2

## Water- and Alkali-Soluble Cellulose Ethers

77271

SOV/63-4-6-5/37

sulfation of cellulose with sulfuric acid and methanol mixture (Izv. vuzov MVO SSSR, Neft' i gaz, 1959, Nr 11). Carboxyethylcellulose was obtained in reaction of cellulose with acrylonitrile in the presence of alkali (Avt. svid., 1949, p 77409) and in reaction of acrylonitrile with alkali cellulose (ZhPKh, 1956, Nr 1, p 105). The syntheses of methyl-, ethyl-, and hydroxyethylcellulose as well as mixed cellulose ethers are reviewed. There are 5 figures; and 147 references, 41 U.S., 13 U.K., 1 French, 1 Belgian, 2 Dutch, 3 Canadian, 2 Swiss, 8 Swedish, 1 Japanese, 1 Austrian, 18 German, 56 Soviet. Recent U.S. and U.K. references are: E. H. de Butts, J. A. Hudry, J. H. Elliott, Ind. Eng. Chem., 49, Nr 1, 94 (1957); Chem. Eng. News, 35, Nr 4, 78 (1957); Chem. Trade J., Nr 3620, 905 (1956); Chem. Eng. News, 34, Nr 36, 4253 (1956); J. Swintosky, A. Kaufman, J. Am. Pharm. Ass., 44, Nr 9, 540 (1955).

Card 5/5

## Water- and Alkali-Soluble Cellulose Ethers

77271

SOV/63-4-6-5/37

High-viscosity carboxymethylcellulose compound type GEC was synthesized lately for the improvement of the rheological properties of clay-rich or clay-poor drilling fluids; these compounds allow for an increase of the drilling speed and elimination of the complicated and labor-consuming clay handling (Neft. khoz., 1958, Nr 1). The applications of carboxymethylcellulose in the detergent industry (Maslob.-zhir. prom., 1958, Nr 7) and ore flotation (Tsvet. met., 1957, Nr 11) is contemplated in the USSR. Carboxymethylcellulose is also used as thickener for textile printing dyes, in the manufacture of glues, and in numerous other industries. Low-molecular-weight highly pure compounds can be used in the preparation of blood plasma substitutes (Trudy Mosk. instituta neftekhim. i gaz. prom., 1959, Nr 24; DAN SSSR, 1958, Vol 123, Nr 3, p 471). The increase in production of carboxymethylcellulose is hampered, however, by the insufficient production of chloroacetic acid. Various syntheses of cellulose sulfates are reviewed, among them the

Card 4/5

Water- and Alkali-Soluble Cellulose Ethers

77271  
SOV/63-4-6-5/37

to a minimum, and then increased again. This was explained by two simultaneously acting factors; namely the increasing degree of the macromolecules' asymmetry, due to the introduction of substituents, and the simultaneous decreasing hydration and asymmetry of the macromolecules. Highly etherified carboxymethylcellulose ( $\gamma = 135$  and 198) were not thixotropic (RZhKh, 1957, p 10029). The maximum thixotropy was shown by solutions with  $\gamma = 70$ ; this was explained by the maximum symmetry of the macromolecules at this degree of etherification, which enables them to approach and form a thixotropic solution. The thixotropy decreased with the degree of polymerization. Application of carboxymethylcellulose in drilling fluids is discussed. A special type of carboxymethylcellulose was developed which showed a lower water separation rate from clay suspensions than natural stabilizers, such as starch, rosin, and sodium alginate (Novosti neftyanoy tekhniki, neftepromyslovoye delo, Gostoptekhzdat, 1952, Nr 9; 1953, Nr 6; 1955, Nr 12; 1956, Nr 9; 1957, Nr 7; 1958, Nr 8).

Card 3/5

Water- and Alkali-Soluble Cellulose Ethers

77271

SOV/63-4-6-5/37

replaced in methylcellulose compounds (Soobshch. VKhO, 1955, Nr 3, p 9). Carboxymethylcellulose compounds consist of fractions with different degrees of etherification and polymerization. Industrial carboxymethylcellulose nearly always contains an admixture of slightly soluble gel fraction. It was established (DAN SSSR, 1958, Vol 123, Nr 2, 289) that the individual fractions have different stabilizing properties when used as stabilizers of the oil well drilling fluids. The gel fraction has low stabilizing properties, and the stabilizing effect of carboxymethylcellulose compounds solution increases with the decreasing content of the gel fraction, notwithstanding the decreasing viscosity of the solution (Izv. vuzov MVO SSSR, Neft' i gaz, 1959, Nr 6). The viscosity depends on the fraction content, and also on the degree of etherification (DAN SSSR, 1959, Vol 126, Nr 5; RZhKh, 1957, p 10029). With increasing degree of etherification ( $\gamma = 20$  to 200) the viscosity increased to a maximum, decreased

Card 2/5

15:9530

77271  
SOV/63-4-6-5/37

**AUTHORS:** Zhigach, K. F. (Doctor of Chemical Sciences), Finkelshteyn, M. Z. (Candidate of Chemical Sciences), Mogilevskiy, Ye. M., (Candidate of Technical Sciences) Timokhin, I. M.

**TITLE:** Water- and Alkali-Soluble Cellulose Ethers

**PERIODICAL:** Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 6, pp 718-725 (USSR)

**ABSTRACT:** This is a review of the literature dealing with water- and alkali-soluble cellulose ethers used in the preparation of thickening and stabilizing agents, glues, etc. The solubility of carboxymethylcellulose is determined basically by the degree of its etherification  $\gamma$  and the degree of polymerization DP. The difficulty in obtaining highly substituted carboxymethylcellulose compounds was explained by the fact that in methylation in alkaline and neutral media, the secondary hydroxyl groups have the highest reactivity, and that both secondary hydroxyl groups can be

Card 1/5

SOV/63-4-3-19/31  
Scientific-Technical Conferences and a Seminar on the Production and Processing of  
Chemical Fibers

paration of raw material for polyamide fibers; Candidate of Technical  
Sciences V.S. Khaylov and Ye.G. Vendel'shteyn (GIAP) on the preparation  
of dimethylterephthalate for polyester fiber.

Card 6/6



SOV/63-4-3-19/31

Scientific-Technical Conferences and a Seminar on the Production and Processing of  
Chemical Fibers

Klin Combine) on the improvement of the quality of caprone cord and silk. A seminar on the subject: "New Technique and Advanced Technology in the Production of Artificial and Synthetic Fibers and Semi-Finished Products for Them" took place December 18-20, 1958. N.Ya. Alekhin (GNTK USSR) read a paper on the development of chemical fibers; Candidate of Chemical Sciences G.I. Kudryavtsev on achievements in the field of the production of synthetic fibers; Candidate of Technical Sciences Ye.M. Mogilevskiy on technological achievements in the production of viscose fibers; G.G. Finger (VNIIV) on the acceleration of the desulfuration process of viscose silk without application of alkali reagent; A.P. Kraynov (Branch of VNIIV) on the formation of fibers from triacetylellulose sirups; Candidate of Technical Sciences A.A. Beer on "The Preparation of Monomers for Synthetic Fibers Based on the Reaction of Telomerization"; Candidate of Technical Sciences A.A. Artem'yev and Ye.V. Genkina (GIAP) on the pre-

Card 5/6

SOV/63-4-3-19/31  
 Scientific-Technical Conferences and a Seminar on the Production and Processing of  
 Chemical Fibers

Technical Sciences Ye.M. Mogilevskiy (VNIIV) on the development of apparatuses for the continuous production of viscose silk; I.P. Sakharov and S.P. Lipinskiy (VNIIV) on increasing the spinning rate for viscose silk to 90 - 95 m/min and on the electric spindle EV-3 developed by them; L.M. Slobodkina, Kalinin Combine, on the method of regenerating the precipitation tank by contact with smoke gases which has been developed in the USSR; B.G. Zabrodin, Kalinin Combine, and Ye.P. Volkov (Mogilevskiy zavod iskusstvennogo volokna - Mogilev Plant of Artificial Fiber) on the work of viscose fiber plants and its improvement; N.N. Agranovskiy (VNIIV) and Ye.S. Merzon (GIPROIV) on the production of carbon disulfide; G.A. Boronichev, Kalinin Combine, on the work of an installation for the regeneration of carbon disulfide; N.A. Khruzin, Kiyev Combine, and Candidate of Technical Sciences N.D. Katorzhnov (VNIIV) on the continuous production of caprolactam and the spinning of caprone silk; Candidate of Technical Sciences E.V. Khayt (VNIIV) on the production of caprone cord fiber; N.I. Petrunin, Kalinin Combine, and Candidate of Technical Sciences B.V. Petukhov (VNIIV) on the production of the fibers nitron and lavsan; T.A. Bukov (Klinskiy kombinat -

Card 4/6

SOV/63-4-3-19/31  
 Scientific-Technical Conferences and a Seminar on the Production and Processing of  
 Chemical Fibers

Conference of Workers of the Industry of Chemical Fibers took place. It was attended by 300 persons of plants and scientific research and designing installations. The President of the Gosudarstvennyy komitet Soveta ministrov SSSR po khimii (State Committee for Chemistry in the Council of Ministers of the USSR) V.S. Fedorov pointed out the great importance of developing the production of chemical fibers. A.L. Borisov (Upravleniye khimicheskikh volokon - Board of Chemical Fibers) read a paper on the tasks of workers of the industry of chemical fibers; Candidate of Technical Sciences G.I. Kudryavtsev (VNIIV) on the subjects of research work in the field of chemical fibers; S.L. Dich (GIPROIV) on new techniques applied in newly built plants; I.G. Shimko (Kiyevskiy kombinat iskusstvennykh volokon - Kiev Combine of Artificial Fibers) on research conducted in the combine concerning the production of caprone fiber and artificial silk; V.P. Yunitskiy (Kalininskiy kombinat - Kalinin Combine) on technical improvements in the Combine; Professor N.V. Mikhaylov on: "Work in the Field of Preparing Highly-Resistant Viscose Cord"; S.M. Geysberg (Leningradskiy zavod iskusstvennogo volokna - Leningrad Plant of Artificial Fibers) on the experience of introducing a unit for the continuous production of alkali cellulose; Candidate of

Card 3/6

Scientific-Technical Conferences and a Seminar on the Production and Processing of  
Chemical Fibers

807/63-4-3-19/31

on technical methods of developing the production of chemical fibers; Professor A.B. Pakshver (VNIIV) on modern methods of studying the properties of chemical fibers; Candidate of Technical Sciences G.I. Finkovskiy (GNTK USSR) on "The Production of Woven Materials From Artificial and Synthetic Fibers"; Professor V.Ye. Gusev (Moskovskiy tekstil'nyy institut - Moscow Textile Institute) on the basic principles of mixing natural fibers, especially wool, with chemical ones; N.Ya. Alekhin (GNTK USSR) on preparing staple yarn from fine viscose fiber; Professor V.A. Usenko (Moscow Textile Institute) on the effect of twisting staple yarn on its physical-chemical properties; A.G. Golod (Molinskiy kamvol'nyy kombinat - Molinsk Worsted Yarn Combine) on the experience of processing staple fibers in his plant; N.A. Orlov (VNIITekmash), P.I. Aristov (IVNITI), Doctor of Technical Sciences A.N. Vanchikov (TsNKhET) on the problems of designing and introducing new types of technological equipment. The Conference noted the backwardness in the development of efficient spinning, weaving and finishing equipment, the insufficient coordination of work and the lack of necessary laboratory equipment. On December 15-17, 1968, the All-Union

Card 2/6

AUTHORS: Mogilevskiy, Ye.M., Candidate of Technical Sciences, Finger, G.G. 304/63-4-3-19/31

TITLE: Scientific-Technical Conferences and a Seminar on the Production and Processing of Chemical Fibers

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 3, pp 398-401 (USSR)

ABSTRACT: In November-December 1958 the All-Union Scientific-Technical Conference on Problems of the Application of Chemical Fibers in the Textile, knit goods and Haberdashery Industry took place with the participation of the VKhO imeni Mendeleyeva (All-Union Chemical Society imeni Mendeleyev). It was attended by 250 representatives of plants and scientific research institutes and scientists from China, Hungary, Poland and Czechoslovakia. The deputy of the president of the GNTK of the USSR N.A. Petrov pointed out that rational processing methods are necessary. A.N. Volkov (Upravleniye khimicheskikh volokon Goskomiteta Soveta Ministrov SSSR po khimii - Board of Chemical Fibers of the State Committee on Chemistry in the USSR Council of Ministers) presented a paper on the state and development of the production of chemical fibers in the USSR; Professor Z.A. Rogovin (Moskovskiy tekstil'nyy institut - Moscow Textile Institute)

Card 1/6

PINEL'SHCHIN, M.E.; TIMOKHIN, I.M.; MOGILEVSKIY, Ye.M.; MALININA, A.I.

Obtaining sodium chloroacetate for the production of  
carboxymethyl ethers of cellulose. *Izv.vys.ucheb.zav. neft' i*  
*gas* 2 no.12:43-47 '59. (MIRA 13:5)

1. Moskovskiy institut neftikhimicheskoy i gazovoy promyshlennosti  
imeni akademika I.M. Gubkina.  
(Cellulose) (Acetic acid) (Oil well drilling fluids)

The Influence of the Structure of Viscose Fibre on SOV/153-2-2-22/31  
the Rate of Removal of Sulphur From Fibre

4) In alkalie surroundings, the sulphur is transformed into ions of the sulphur-compounds and the diffusion is accelerated 1,000 times and more. 5) The sulphur-diffusion-rate depends on the degree of the formation-perfection of the viscose-fibre, that is on the amount of the remaining xanthogenate groups. There are 2 tables and 7 references, 6 of which are Soviet.

ASSOCIATION: Vsesoyuznyy zaochnyy institut legkoy i tekstil'noy promyshlennosti i Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna; Kafedra tekhnologii voloknistykh materialov (All-Union Correspondence-Institute for Light- and Textile Industry and All-Union Scientific Research-Institute for Synthetic Fibre; Chair of Technology of Fibres

SUBMITTED: April 23, 1958

Card 4/4

The Influence of the Structure of Viscose Fibre on SOV/153-2-2-22/31  
the Rate of removal of Sulphur From Fibre

limits:  $5 \cdot 10^{-15}$  -  $5 \cdot 10^{-7}$  (at  $80^{\circ}$ ). At the same time, the coefficient passes 3 sharply distinguishable zones: a) it approaches 0 during the treatment of fibre in a swelled condition; b) it increases up to  $1 \cdot 10^{-10}$  -  $100 \cdot 10^{-10}$  in an acid- or neutral medium and c) it increases to  $5,000 \cdot 10^{-10}$  during desulphuration in an alkaline medium. This distinction is explained by a fundamentally different mechanism of sulphur-diffusion in different media. On the basis of their results, the authors arrive at the following conclusions: 1) The sulphur-diffusion can take place according to two mechanisms: a) by sublimation and b) by secondary sulphur-condensation as crystals of the rhombic sulphur,  $16S_8$ . 2) The rate of the displacement of the sulphur particles in the fibre depends on the size of the pores in the fibre. In a normally swelled fibre the size of the pores enables this displacement at a varying rate, according to the degree of swelling of the fibre. 3) An addition of surface-active agents (OP-10 for example) considerably accelerates the sulphur-diffusion, that is owing to the dispersion and reduction of the aggregate-size.

Card 3/4



The Influence of the Structure of the Viscose Fibre SOV/153-2-2-22/31  
on the Rate of the Removal of Sulphur From Fibre

cleaned (desulphurated). Since this process must be considerably accelerated, the authors undertook the present investigation. It deals with the influence of the molecular structure of the hydrate-cellulose-fibres and films on the rate of the sulphur-removal. The influence of the medium on this rate was also investigated. The usual viscose-acetate rayon (elementary-number 2,000-2,500), were examined dried and undried, wetstretched and dried in a stretched state. Furthermore, rayon with different degrees of decomposition of the cellulose-xanthogenates was tested. For the purpose of comparison, the diffusion-rate of colloidal-sulphur by freshly formed cellulose-film (cellophane) was determined. The solutions of NaOH, Na<sub>2</sub>S, and Na<sub>2</sub>SO<sub>3</sub>, which are used in practice, as well as water with the addition of surface-active-agents (oxyethylated alkyl-phenol OP-10) and solutions of sulphuric acid were used for desulphurating. The results are shown in table 1. As may be seen, the diffusion-coefficient D changes during the sulphur-removal from the viscose-fibre within very wide

Card 2/4

5(1,3)

AUTHOR:

Finger, G. G., Pakshver, A. B.,  
Nogilevskiy, Ye. M.

SOV/153-2-2-22/31

TITLE:

The Influence of the Structure of the Viscose Fibre on the  
Rate of the Removal of Sulphur From Fibre (Vliyaniye  
struktury viskoznogo volokna na skorost' udaleniya sery iz  
volokna)

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimiches-  
kaya tekhnologiya, 1959, Vol 2, Nr 2, pp 258-262 (USSR)

ABSTRACT:

The viscose fibre and the hydrate-cellulose-films possess a  
very irregular molecular structure. This is a result of the  
fast extraction of the cellulose-molecules from the spinning-  
solution. It affects the dissolution-rate of the fibre in  
alkali (Ref 1), the iodine and copper sorption from the  
solutions (Ref 2), the dye-stuff and alkali diffusion (Ref 3)  
of the films, et al. These differences of the molecular  
structure have a particularly strong influence on the  
removal of sulphur from fibres and films. As is well  
known, sulphur containing secondary compounds deposit  
during their decomposition elementary sulphur, which partly  
remains within the fibre and must be removed when being

Card 1/4

ZHIGACH, K.F.; FINKEL'SHTYN, M.Z.; TIMOKHIN, I.M.; MOGILEVSKIY, Ye.M.

Obtaining fractions and low polymer preparations from carboxymethyl-cellulose and studying their physicochemical properties. Trudy  
MINKHIGP no.24:257-268 '59. (MIRA 13:3)  
(Cellulose)

MOGILEVSKIY, Ye.M.; KORNEVA, S.I.

Bleaching of viscose fiber by sodium chlorite. Khim.volok.  
no.6:25-26 '59. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.  
(Rayon) (Bleaching) (Sodium chlorite)

NIKOLAYEVA, N.S.; NOGILEVSKIY, Ya.M.; VERETENNIKOVA, T.P.; LIN'KOVA, Z.K.

Spinning solutions of cellulose in quaternary ammonium bases.  
Khim.volok. no.4:26-29 '59. (MIRA 13:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.  
(Rayon) (Ammonium compounds)

FINGER, G.G.; PAKSHVER, A.B.; MOGILNYSKIY, Ya.M.

Accelerated methods for desulfurizing viscose silk in continuous process machines. Khim.volok. no.3:51-54 '59.

(MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (VNIIV).

(Rayon spinning)

MOGILEVSKIY, Ye.M.; GORODETSKAYA, L.A.

✓ Using the high-speed continuous method for the manufacture of viscose silk. Khim.volok. no.3:47-50 '59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (VNIIV).

(Rayon)

MOGILNYSKIY, Ye.M.; KHOR'KOVA, O.G.; KUPINSKIY, R.V.

Production of viscose silk by the continuous method.  
Khim. volok. no.2:53-59 '59.

(MIRA 12:9)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.  
(Rayon)





APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134900034-6

MOGILEVSKIY, Ye.M.; KHOR'KOVA, O.O.; RYKOVA, V.V.

Desulfurizing viscose fiber with solutions of surface-active  
substances. Tekst. prom. 18 no.11:9-12 N '58. (MIRA 11:12)  
(Rayon) (Desulfuration) (Surface active agents)

IONOVA, T.V.; UZINA, R.V.; BOGOMOLOVA, N.A.; MOGILNYSKIY, Ye.M.; BOGOVIN, Z.A.

Effect of the chemical composition of reagents on the bond strength  
between viscose cord thread and rubber. Tekst. prom. 18 no.8:35-37  
Ag '58. (MIRA 11:10)  
(Rayon) (Textile chemistry) (Tires, Rubber)